**Biologial Sciences Division (BSD) Implementation Guidelines for**

**Research Resumption – Phase 2**

June 5, 2020

Guiding Principles for Phase 2 Research Resumption

We are currently in Phase 1 in which only critical maintenance of key laboratory reagents and equipment and approved COVID-related research are being conducted. In Phase 2 we will initiate a gradual resumption of research activity in which a limited number of research personnel will be allowed access to the labs at any given time to initiate time-sensitive and essential research while we work together to ensure the safety of our researchers and our broader community and while we test and confirm the effectiveness of our safety and physical distancing practices.

During Phase 2 our top priority must be to maintain the health of BSD and University personnel and to minimize transmission of SARS CoV2 infection. The health and safety of all individuals must be the primary focus of all activities. The guidelines described in this implementation plan should be considered as required processes and will be monitored and enforced. University-wide policies and guidance regarding COVID are available at <https://goforward.uchicago.edu/> and also apply to Phase 2 research resumption. Lastly, we encourage you to review the University’s guidance on the respective roles and responsibilities of Researchers, PIs, Chairs, Deans, which is available at <https://goforward.uchicago.edu/research-planning/>.

Phase 2 Guidelines

* Our plans must align with State and City Public Health authorities and orders.
* Considering the current rate of COVID-19 infection in Chicago and Illinois, a return to business as usual with full research operations is not possible at this time.

**In order to conduct research in Phase 2:**

* All labs must have appropriate personal protective equipment (PPE), disinfectant solutions and personal sanitation devices and supplies. Masks and disinfectant will be provided by the University/Division.
* All returning researchers must have completed the ORS COVID-related training.
* Each Principal Investigator must present a Research Resumption Plan (RRP) that addresses safety, physical distancing, and lab density along with plans to monitor, evaluate and govern safe behaviors in the lab. Chairs/Section Chiefs/Directors must evaluate and recommend for approval a RRP by signing the PI’s proposed RRP. Upon signature, the PI must upload the RRP to the University [web-based research intake form](https://goforward.uchicago.edu/research-planning/) where the PI will complete a set of questions regarding sponsored funding and regulatory compliance for proposed Phase 2 research. Uploaded forms will be simultaneously forwarded to the BSD Dean and Chairs/Section Chiefs. Final approval of each RRP requires the Dean’s approval and the Chair’s final digital approval. Chair’s final approval through the online system will be contingent upon the following: completion of on-line safety training by all Phase 2 researchers and the Chair’s confirmation that each RRP has appropriate PPE, an assigned Laboratory Safety Contact, and plan to collect daily attendance.

Phase 2 safety measures:

* Anyone displaying any symptoms of COVID-19 should not be on campus.
* An individual’s physical presence on campus and entering our research buildings is an attestation that the individual is asymptomatic.
* Researchers who develop symptoms of SARS CoV2 while on campus will be instructed to return home to self-quarantine and arrange for testing.
* Anyone who tests positive for COVID-19 and has been in a University owned or operated facility must contact C19HealthReport@uchicago.edu so that health and safety of others in our facilities can be addressed.
* Universal masking, physical distance measures, safety training, frequent hand washing and access to hand sanitizing stations, frequent cleaning of surfaces, and self-monitoring for symptoms.

Any work that can be conducted remotely (e.g., computational projects, administrative support staff, etc.) should continue to be conducted off-campus. This also includes group or lab meetings, seminars and other similar activities which must continue to be conducted virtually during Phase 2 and until instructed otherwise.

During the initial phases of ramp-up, no one should be pressured to work on campus if they are uncomfortable doing so, and retaliatory action taken against anyone who prefers not to return to work on campus due to concerns about infection will not be tolerated. Students and postdoctoral researchers should be advised they can speak to OGPA to report and resolve any such concerns, and staff employees should be advised that they can speak with departmental, divisional or University human resources.

We will all be working together to develop and evolve safe lab practices and behaviors during Phase 2. We must create an environment that encourages coworkers to share concerns about COVID-related personal and public health issues. PIs should ensure that all researchers are familiar with the use of the UCAIR (University of Chicago Accident and Incident Reporting) app as a rapid means of incident reporting (including anonymously) and that names and numbers of the appropriate contact individuals are clearly posted in all labs.

Pre-requisites for a Phase 2 Research Ramp-up:

*Cloth Masks, Cleaning Solutions, Signage, Hand Sanitizers. Providing these elements will be the responsibility of the University/Dean’s Office*

* The University will provide two cloth masks for each returning researcher along with a supply of disposable masks for instances where researchers do not have their cloth masks for whatever reason. We will designate distribution points where representatives from each lab may arrange to pick up supplies for their group.
* Gloves are considered standard research PPE and thus the responsibility of the individual labs.
* PIs will need to consider and procure any additional PPE requirements for lab members (e.g., disposable gowns, face shields, etc.), such as during training and procedures where two lab members must work in close proximity.
* Cleaning and disinfectant solutions should be thoughtfully positioned so that lab personnel may clean upon entering and exiting the lab; may gown and de-gown if necessary; discard and change gloves and wash hands as needed; all high touch shared equipment, freezers, warm and cold rooms, etc., should have nearby wipes and disinfectants.
* Plans and signage will be in place for use for elevators and bathrooms, and for use of common areas, shared rooms, shared equipment not located in the lab per se. Some standard signage templates will be provided to departments.
* All commonly used doorways will be assessed by facilities and modified as warranted for safe usage: for example, mechanism to hold open during work day (where permitted), mechanism to open without use of hands, etc.
* Hand sanitizing stations will be available at appropriate locations.

*Core Facilities:*

* In order to resume research activities laboratories will need to have access to Core Facilities. We are therefore implementing plans to ensure adequate staffing of Core Facilities and Shared Equipment to support the research needs of individual laboratories.
	+ Core facilities managed by the BSD will also complete their own Research Resumption Plan.
	+ Based on the research activities described in the PI research resumption plans, Core Facilities will take appropriate measures to ensure they are functional, staffed, and maintained.
* Animal Resources Center (ARC) has planned for the animal needs of on-site researchers and has ramp-up plans to protect its staff as well as back-up plans in the event of a ramp-down or self-quarantines.

Research Density During Phase 2 of Ramp Up:

Laboratory personnel will be expected to maintain a minimum physical distance between adjacent researchers in the lab. Taken in conjunction with other safety measures (universal masking, safety training, frequent hand washing, frequent cleaning of surfaces, self-monitoring for symptoms and keeping symptomatic people off campus and out of the laboratories, etc.) these measures aim to reduce chances of introducing COVID-19 into the laboratories and spread amongst those in the laboratory. Given the diversity of our laboratory configurations, there is not a single formula that will serve to guide the safe resumption of our division-wide research operations. Each researcher should be assigned appropriate space to conduct their research while minimizing risk of exposure to COVID-19.

With these considerations in mind, we will use the following metrics for the initial Phase 2 resumption period:

* A minimum 6-foot distance between any two researchers working at their designated research area will be required. The RRPs (a form for which will be provided) must describe how each proposed researcher will be assigned a designated research area (DRA). PIs must describe an area in the lab where a researcher can conduct their bench research (including moving within this assigned area) with confidence that they will be separated by a minimum of 6 feet from other investigators. These DRAs should not contain common items or equipment required for use by other investigators (if present, these must be moved to a common area), and the space should be configured and clearly demarcated such that other investigators working in the same shift do not encroach within 6 feet of the individuals designated area. If there are no natural barriers demarcating the designated space (i.e., unoccupied bench space, walls, etc.) it may be necessary to mark the research boundaries via other methods (taped boundaries on floors, etc.).
* The number of researchers working together in the lab at any given time may not exceed 25% of maximal lab occupancy. Lab occupancy refers to the number of researchers a given lab can reasonably accommodate under normal conditions and is usually equivalent to the number of workstations.
* An essential element of our Phase 2 research operations is the ability to monitor, evaluate, and rapidly evolve best safety and physical distancing practices to ensure the safety of our researchers and to pave the way for subsequent research ramp-up. Accordingly, no more than two asynchronous lab shifts will be allowed per day in Phase 2.
* In addition to a plan describing the designated research areas, PIs will provide a plan that ensures the safety of all personnel who share the common lab space (all space other than designated research areas), including the shared use of resources (freezers, cold rooms, incubators, etc.), research support rooms (tissue culture, microscopy, etc.), and common areas such as kitchens, eating areas, and conference rooms.

Each PI will tailor their plans to the unique features of their lab space including the physical layout, the research support rooms and infrastructure, common areas, instruments, and other lab resources that coworkers must navigate each day while maintaining the safety and physical distancing protocols required to minimize the spread of COVID19. Many of our labs are organized around the layout of lab benches and lab bays; others are organized more by open rooms, cubicles and desk space. For bench-oriented labs, PIs are encouraged to make use of unoccupied benches (or walls) to provide a physically-protected area for their researchers. Researchers who require a single bench for their experiments would require some combination of the following to provide natural protection on both sides: a wall; unoccupied bench plus unoccupied aisle (between two bays, for example); or an unoccupied bay (two unoccupied benches). An example of adjacent DRAs might be two researchers located at opposite sides of adjacent bays. Such an arrangement would provide more than 6 feet of separation between the two researchers while they move within their designated research areas. For other types of lab configuration, each researcher could be assigned a 300-400 SF DRA to ensure their physical separation. If such areas are not physically separated from the rest of the lab space, it will be necessary for PIs to find appropriate ways to demarcate and protect researchers working within semi-open areas. For both bench-oriented and open spaces, PIs must describe both the physical space and the behavioral guidelines that will together provide for the researcher’s safety.

*Activities Involving Multiple Lab Personnel:* When two or more researchers are working simultaneously, PIs must plan for physical distancing and safety when the personnel leave their DRAs to access common resources. RRPs must identify which resources (freezers, shaker incubators, cold/warm rooms, etc.) or instruments co-workers require and provide a plan for their safe use and for physical distancing. For example, two researchers who use all the same equipment might need to be placed on different shifts. Particular thought should be given to the availability of sinks within the laboratories for hand washing. Ideally, one researcher should be assigned to one sink during their shift, depending on the arrangement of the laboratory.

*Asynchronous Shifts to Facilitate the Need to Maintain Physical Distancing*: PIs and researchers may organize into shifts, contingent upon an appropriate Research Resumption Plan and compliance with the metrics described above. In Phase 2, while PIs and researchers work to maximize safe operating procedures, we will keep the limit to two shifts per day.

* Entering and Exiting Labs: Entry into the laboratory through a common passage should include access to appropriate PPE, waste containers, and disinfectant so that incoming researchers can wash hands and don appropriate PPE, and outgoing researchers can dispose of gloves, wash hands, etc. before exiting.
* Safe Shift Practices: Personnel must ensure any common bench space and high touch areas and shared equipment are disinfected and wiped before and after their use. There should be an established means of communication between shifts in the event of protocols that run overly long, etc.

*Principal Investigators’ Responsibilities:*

Each PI of an active lab is required to develop a research resumption plan (RRP). A template for the RRP will be provided but be sure that you have addressed the following issues that are relevant to your lab:

* List ALL researchers in your group: Research scientists, postdoctoral fellows, graduate students, technicians, and other (and specify their roles). Undergraduates, volunteers, and visitors will not be allowed in BSD research buildings during Phase 2.
* Based on research density metrics described above, propose a plan that details the safe resumption of research in your lab and the maximum number of people at any given time. For most labs, this will be between 2-4 researchers working together at any given time. Because lab architectures are critical to assigning safe work areas, obtain laboratory floor plans from Archibus to assist in your planning, and work with your Chair/Chief/Director to devise optimal safe solutions.
* Provide a schedule or calendar with start and end times of each shift along with the names and contact information for each person by shift. Describe plans for communication between shift-workers, self-cleaning, etc. In Phase 2, we will only allow two shifts on any given day to allow for a gradual ramp-up of research operations.
* As long as your lab shifts do not exceed 25% of normal lab occupancy, or activity, we will allow for some rotation of lab members. In other words, if you are approved for a maximum of 2 workers at a time, and one or both of these researchers do not need to work all 7 days of their shift, you may substitute an additional researcher(s) to work those alternate days. Most importantly, you must provide a schedule that very clearly outlines which researchers will be in the lab at any given time on any given day and stationed at which DRA. This is a critical aspect of the RRP as it underpins your ability to monitor, evaluate, and amend as necessary the safety protocols that protect our lab staff and that are prerequisites for any subsequent research ramp-ups.
* Provide a list of all researchers who will come to campus in Phase 2 along with their contact information (email, phone, UChicago IDs). Please identify which researcher(s) will serve as your Lab Safety Contact.
* Describe any equipment or other resources that need to be repositioned, or that require special cleaning procedures in order to meet biosafety criteria. Designate a lab member to be responsible for such equipment (such as the Lab Safety Contact).
* Note which resources (freezers, incubators, equipment, etc.), support rooms (cold room, warm room, tissue culture, etc.), etc., co-workers will need to share and describe plans for social distancing and for cleaning common surfaces and areas when researchers are moving about outside of their assigned lab areas.
* In addition to the calendar/schedule noted above, institute a daily sign-in sheet for your laboratory that will be maintained by your designated Laboratory Safety Contact. All lab members who have entered the lab on that day must sign in and sign out. This information must be recorded daily and maintained by the PI. This will be essential for effective contact tracing.
* Your plans should identify and address risks related to your lab members’ commutes to and from the lab, for example, exposure risk due to public transportation or personal safety risk resulting from having to work later into the night because of lab shifts.
* Describe any research core(s) or animal facilities requirements for the initial Phase 2 and subsequent phases.
* Describe plans for posting the following information in your lab: individual safety protocol; lab cleaning protocols; social distancing protocol; and current list of COVID-19 symptoms.
* Describe plans for monitoring daily health status (home temperature twice a day and general health status), for ensuring each lab member knows they cannot come to lab if symptomatic, and for encouraging and supporting lab members to inform coworkers and the PI when they detect a lab member who is symptomatic.
* Describe how you (the PI), your Lab Safety Contact, and your department chair will oversee, monitor, evaluate and remedy as necessary safety and physical distancing practices. Note that each department/section/institute will appoint one or more Departmental Safety Officer(s) (DSOs), and the Chair or the DSOs will perform walk throughs of each lab at least two times per week. The Office for Research Safety will perform spot checks.
* Describe a communication strategy for potential SARS CoV2 infected research personnel. This will be necessary for contact tracing of the individuals they might have been in contact with or which rooms and areas of the laboratory they were in prior to the infected individual testing positive. The lab’s calendar/schedule along with the daily sign-in sheet should be key tools in this process. Chain of communication should then go to Department Chair and then to the Dean’s Office.
* Once your Chair/Section Chief has recommended your RRP for approval, submit your RRP to the University through the University web-based research intake form (available at <https://goforward.uchicago.edu/research-planning/> for final approval by the Dean).

*Department Chair/Section Chief Resumption Responsibilities:*

* Review each PI research resumption plan, amend as necessary and recommend the RRP for approval (i.e., submission through the University portal). Submit a PI’s RRP to the Dean for approval after you confirm completion of on-line safety training by all Phase 2 researchers, and that the researchers have appropriate PPE, an assigned LSC, and plan to collect daily attendance. A process for approval is included in the RRP form.
* Ensure that density and social distancing is maintained at the junctures of individual labs.
* Ensure that rooms, equipment, and common areas shared amongst multiple Departmental laboratories are properly monitored and maintained. Each piece of shared departmental equipment should be assigned to a relevant lab member (or Departmental Safety Officer, see below) who will be responsible for regular disinfection of the high touch areas, and signage should be placed near shared equipment to remind individual users to clean before and after their shifts if they have used shared equipment.
* Work with Office of Research Safety to designate a Departmental Safety Officer (DSO) who will work with you, ORS and departmental PIs to monitor, evaluate and ensure safe lab practices. Coordinate with the Lab Safety Contacts to schedule twice weekly walk throughs of each departmental lab to monitor for appropriate density, PPE usage, and physical distancing.
* Handle any incidents or concerns among their faculty and escalate when required or appropriate to the Dean(s).
* The Office of Research Safety will also be performing spot checks of the research buildings and will report violations to the Dean’s Office. Given the nature of Phase 2 operations, the Dean will enforce a low tolerance policy for failure to comply with safety practices. Labs will receive a warning from the Dean’s Office after the first violation. Upon receiving a second violation, the lab operations will be downgraded to the research guidelines defined by the previous phase of operations, and, if necessary, closed until approved by the Dean.
* Ensure the chain of communication—from the PI -> Chair -> Dean’s Office—will be followed for the escalation of any problem related to safety or an infected individual.
* Ensure Department faculty and research personnel are familiar with the safety incident reporting tool – [UCAIR](https://ehs-prd-01.uchicago.edu/ehsa-ucair/InjuryIllnessIndexUOFC-IT.html) – from ORS. This tool supports desktop and mobile app reporting, including anonymous reporting, if students or other lab personnel believe that they are being placed at risk.  ORS receives these notifications routinely and can immediately alert the relevant dean, chair, PI and VPR.
* After reviewing the RRPs for each PI in your department or section, coordinate with your DSO(s), LSCs and PIs to maintain an updated checklist that your safety officers will use for their twice-weekly lab safety walk-through; schedule follow up meetings (via zoom) to evaluate the safety reports, along with any reports from ORS visits, and work with your PIs to remedy any shortcomings and to help evolve an improved set of protocols and safe-practices for the next ramp-up phase.
* If faculty RRPs were submitted prior to attainment of required PPE (masks and sanitation supplies) and prior to their completion of the required ORS COVID-safety training module, the BSD Dean will rely upon the Chairs/Chiefs to inform us once these prerequisites have been met so that we can release final approvals.

Next Ramp-up Phase: The next ramp-up phase of increased density will be contingent upon compliance with state and local orders as well as evidence that we have put into practice effective safety and social distancing practices, that our community remains committed to safe practices on campus as well as in our personal lives, and that our practices align with those prescribed by the public health authorities.